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SUMMARY

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Australia

METHODS OF INCREASING THE USEFULNESS OF NATURAL WOOL

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METHODS OF INCREASING THE USEFULNESS OF NATURAL WOOL

F.G. Lennox

Research conducted since 1949 in the Australian Wool Research Laboratories, Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.) to improve the utilization of wool is covered in this paper. Investigations on th structure and physical and chemical properties of wool are only briefly described. More detail is given of research to improve its handling, processing and utilization.

Improvements in the baling of wool to avoid jute contamination and increase the density of packing are described, and also the sampling of baled wool by coring for estimation of yield of greasy wool or the moisture regain of scoured and carbonized wools. Reference is made to the development of a scourable branding fluid for sheep, to improvements in fellmongering for recovery of wool from sheepskins, and to the use of tanned sheepskins for the prevention of bedsores in hospital patients. Prevention of damage to wool during carbonizing by the addition of certain detergents to the sulphuric acid used to impregnate the burry wool has been demonstrated, and a method based on the use of a petroleum fraction has been evolved for cleaning greasy wool with less risk of tangling the fibres and subsequent fibre breakage than when soap-soda scouring is used.

Among improvements described for use in textile processing are the sliver-converter as an alternative to the worsted card, a comb control unit for improving the quality of top obtained from the Noble Comb, better dye-pastes for application in melange printing, and a variety of finishing processes. Among the finishing processes are a new method for imparting shrinkage-resistance, a method of applying dyestuffs in cold formic acid solution, the use of dieldrin for conferring moth resistance, an easy-care process for wool fabrics and a process for durably creasing slacks and skirts. In research to achieve optimal utilization of wool goods a method has been evolved for laundering and sterilizing shrink-resist wool blankets without deterioration, and new testing methods to assess relaxation shrinkage and felting shrinkage have been developed.

Some of the improvements described could more easily be adopted in countries where the wool textile industry is now being built up rather than in those countries where it is already well established.

The improvements introduced in the wool industry over a relatively short period of time show what can be accomplished by the application of modern science and technology to a traditional industry dating back many hundreds of years.

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